MARKED-UP VERSION OF AMENDED CLAIMS

1. (Amended) A traffic light violation prediction system for a traffic signal having a current light phase comprising one of the set consisting of at least red and green, comprising:

at least one violation prediction image capturing device, said violation prediction image capturing device providing image data representative of [showing] at least one vehicle approaching said traffic signal; [and]

a violation prediction unit, responsive to said violation prediction image capturing device and an indication of said current traffic light phase, wherein said violation prediction unit is operative to generate [generates] a violation probability score for said at least one vehicle approaching said traffic signal, said violation probability score reflecting a likelihood that said at least one vehicle will violate a red light phase of said traffic signal; and

wherein said violation prediction system is further operable to record at least one image of said at least one vehicle approaching said traffic signal responsive to a determination that said violation probability score is at least as large as a predetermined threshold.

7. (Cancelled)

17. (Amended) The system of claim 16, [.] wherein said prediction unit further determines whether said required deceleration is larger than a specified deceleration value limit, and if so, updates a violation prediction value for the current frame to

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indicate that a violation is predicted based on the information contained in the current frame.

18. (Amended) A method for predicting and recording a traffic light violation of a traffic signal having a current light phase comprising one of the set consisting of at least red and green, comprising:

providing image data representative of [showing] at least one vehicle approaching said traffic signal; and

generating, responsive to said image data [violation prediction image capturing device] and an indication of said current traffic light phase, a violation probability score for said at least one vehicle approaching said traffic signal, said violation probability score reflecting a likelihood that said at least one vehicle will violate a red light phase of said traffic signal; and

recording at least one image of said at least one vehicle approaching said traffic signal responsive to a determination that said violation probability score is at least as large as a predetermined threshold.

22. (Amended) The method of claim 18, further comprising[:

allocating violation recording resources responsive to said violation probability score; and]

recording a plurality of violation images of said at least one vehicle approaching said traffic signal, said vehicle having a violation probability score at least as high as [a threshold score.] any other of said at least one vehicle approaching said traffic light.

23. (Amended) The method of claim 18, further comprising[:]

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allocating violation recording resources responsive to said violation probability score [; and

recording a plurality of violation images of said at least one vehicle approaching said traffic signal, said vehicle having a violation probability score at least as high any other of said at least one vehicle approaching said traffic light].

25. (Cancelled)

35. (New) A traffic light violation prediction system for a traffic signal having a current light phase comprising one of the set consisting of at least red and green, comprising:

at least one violation capturing resource; and

a violation prediction unit, responsive to said violation prediction image capturing device and an indication of said current traffic light phase, wherein said violation prediction unit is operative to generate [generates] a violation probability score for said at least one vehicle approaching said traffic signal, said violation probability score reflecting a likelihood that said at least one vehicle will violate a red light phase of said traffic signal; and

wherein said violation prediction system is further operable to allocate said at least one violation capturing resource to capture image data showing said at least one vehicle in the event that said violation probability score satisfies a predetermined criteria.

36. (New) The system of claim 35, wherein said predetermined criteria is satisfied in the event that said violation

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probability score is at least as large as a predetermined threshold.

37. (New) The system of claim 35, wherein said predetermined criteria is satisfied in the event that said violation probability score is at least as large as a violation probability score for at least one other vehicle approaching said traffic signal.

38. (New) The system of claim 35, wherein said at least one violation capturing resource comprises at least one violation prediction image capturing device, said violation prediction image capturing device providing image data showing at least one vehicle approaching said traffic signal.

39. (New) The system of claim 38, wherein said violation prediction image capturing device comprises at least one video camera.

40. (New) The system of claim 38, wherein said violation prediction image capturing device comprises at least one digital camera.

41. (New) The system of claim 35, wherein said violation probability score further reflects a likelihood that said at least one vehicle has violated a red light phase of said traffic signal.

42. (New) The system of claim 35, wherein said violation prediction unit comprises software executing on a processor.

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43. (New) The system of claim 35, wherein said violation prediction unit is further responsive to a time remaining in red light phase input.

44. (New) The system of claim 35, wherein said violation prediction unit records a violation prediction value regarding said at least one vehicle approaching said traffic signal.

45. (New) The system of claim 44, wherein said violation prediction value indicates a predicted violation in a first state, and indicates no predicted violation in a second state.

46. (New) The system of claim 35, wherein said prediction unit is further responsive to a current speed of said at least one vehicle approaching said traffic intersection.

47. (New) The system of claim 35, wherein said prediction unit is further responsive to a current acceleration of said at least one vehicle approaching said traffic intersection.

48. (New) The system of claim 35, wherein said prediction unit is further responsive to a current position of said at least one vehicle approaching said traffic intersection.

49. (New) The system of claim 35, wherein said prediction unit is further operable to compute a time remaining before said at least one vehicle approaching said traffic intersection enters said traffic intersection, responsive to determination of a current acceleration of said vehicle.

50. (New) The system of claim 49, wherein said prediction unit is

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further operable to calculate a rate of deceleration required for said at least one vehicle to stop within said time remaining before said vehicle enters said traffic intersection.

51. (New) The system of claim 50, wherein said prediction unit further determines whether said required deceleration is larger than a specified deceleration value limit, and if so, updates a violation prediction value for the current frame to indicate that a violation is predicted based on the information contained in the current frame.

52. (New) A method for predicting and recording a traffic light violation of a traffic signal having a current light phase comprising one of the set consisting of at least red and green, comprising:

providing a first set of image data showing at least one vehicle approaching said traffic signal;

generating, responsive to said first set of image data and an indication of said current traffic light phase, a violation probability score for said at least one vehicle approaching said traffic signal, said violation probability score reflecting a likelihood that said at least one vehicle will violate a red light phase of said traffic signal; and

allocating at least one violation capturing resource to capture a second set of image data showing said at least one vehicle in the event that said violation probability score satisfies a predetermined criteria.

53. (New) The method of claim 52, further comprising determining that said predetermined criteria is satisfied in the event that said violation probability score is at least as large as a

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predetermined threshold.

54. (New) The method of claim 52, further comprising determining that said predetermined criteria is satisfied in the event that said violation probability score is at least as large as a violation probability score for at least one other vehicle approaching said traffic signal.

55. (New) The method of claim 52, wherein said at least one violation capturing resource comprises at least one violation prediction image capturing device, said violation prediction image capturing device providing image data showing at least one vehicle approaching said traffic signal.

56. (New) The method of claim 55, wherein said violation prediction image capturing device comprises at least one digital camera.

57. (New) The method of claim 52, wherein said violation probability score further reflects a likelihood that said at least one vehicle has violated a red light phase of said traffic signal.

58. (New) The method of claim 52, wherein said violation prediction image capturing device comprises at least one video camera.

59. (New) The method of claim 52, further comprising recording a plurality of violation images of said at least one vehicle approaching said traffic signal in the even that said vehicle has a violation probability score at least as high as any other of

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said at least one vehicle approaching said traffic light.

60. (New) The method of claim 52, further comprising allocating violation recording resources responsive to said violation probability score.

61. (New) The method of claim 60, wherein said violation recording resources include at least one violation image capturing device.

62. (New) The method of claim 52, wherein said generating is performed by a violation prediction unit comprising software executing on a processor.

63. (New) The method of claim 52, wherein said generating said violation probability score is further responsive to a time remaining in red light phase input.

64. (New) The method of claim 52, further comprising recording a violation prediction regarding said at least one vehicle approaching said traffic signal.

65. (New) The method of claim 64, wherein said violation prediction indicates a predicted violation in a first state, and indicates no predicted violation in a second state.

66. (New) The method of claim 52, further comprising determining a current speed by said violation prediction unit for at least one vehicle approaching said traffic intersection.

67. (New) The method of claim 52, further comprising determining

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a current acceleration for said vehicle approaching said traffic intersection.

68. (New) The method of claim 52, further comprising computing a time remaining before said vehicle approaching said traffic intersection enters said traffic intersection, responsive to determination of a current acceleration of said vehicle.

69. (New) The method of claim 68, further comprising calculating, by said violation prediction unit, a deceleration required for said vehicle to stop within said time remaining before said vehicle enters said traffic intersection.

70. (New) The method of claim 69, further comprising:

determining, by said violation prediction unit, whether said required deceleration is larger than a specified deceleration value limit; and

updating a violation prediction value for the current frame to indicate that a violation is predicted in the event that said deceleration is larger than said specified deceleration value limit.

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